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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KAVITHA VALLARI DEVARA

Appeal 2007-3041
Application 09/821,122
Technology Center 2600

Decided: September 8, 2008

Before, KENNETH W. HAIRSTON, ALLEN R. MACDONALD, and MARC S. HOFF, *Administrative Patent Judges*.

HAIRSTON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from a final rejection of claims 1 to 25. We have jurisdiction under 35 U.S.C. § 6(b).

We will reverse the lack of written description rejection, sustain the nonstatutory subject matter rejection, and sustain the obviousness rejections.

Appellant has invented a mechanism and a method for inserting data within a transport stream in a transceiver (Figure 1; Spec. 4). An estimate of

future available bandwidth is produced by periodic sampling of bandwidth used by programs of the transport stream together with information regarding upcoming programming changes (Figure 2; Spec. 4 and 11). The estimate of future available bandwidth is used to schedule data insertion within the transport stream (Spec. 4, 11, and 12). The scheduled data is inserted by replacing selected null packets within the transport stream based upon the predicted estimate of available bandwidth (Spec. 4, 11, and 12).

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. For use in a transceiver, an adaptive data insertion mechanism for inserting data within a transport stream without destructive disturbance comprising:

a bandwidth estimator producing an estimate of future available bandwidth within said transport stream from future programming information to be transmitted by said transport stream;

a scheduler prioritizing and scheduling insertion of insertion content to be inserted within said transport stream based upon said estimate of future available bandwidth and required insertion bandwidth of said insertion content; and

an insertion unit inserting scheduled insertion content within said transport stream by replacement of selected replaceable content within said transport stream to form a new transport stream if sufficient bandwidth is available, said sufficient bandwidth being determined from said estimate of future available bandwidth and said required insertion bandwidth.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Rudrapatna	US 5,592,470	Jan. 7, 1997
Sohraby	US 6,192,049 B1	Feb. 20, 2001
Feder	US 2001/0024239 A1	Sep. 27, 2001 (filed Jan. 25, 2001)
Jeffrey	US 6,567,981 B1	May 20, 2003 (filed Mar. 10, 2000)
Wu	US 7,016,337 B1	Mar. 21, 2006 (filed Feb. 28, 2000)
Tranchard	EP 0 926 894 A1	Jun. 30, 1999

The Examiner rejected claim 22 under the first paragraph of 35 U.S.C. § 112 for lack of written description.

The Examiner rejected claims 17 to 20 under 35 U.S.C. § 101 as being directed to nonstatutory subject matter.

The Examiner rejected claims 1, 3 to 5, 7, 9, 11 to 13, 17, 19, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Tranchard in view of Feder.

The Examiner rejected claims 2, 6, 8, 10, 14 to 16, and 18 under 35 U.S.C. § 103(a) as being unpatentable over Tranchard in view of Feder and Sohraby.

The Examiner rejected claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Tranchard in view of Feder and Wu.

The Examiner rejected claims 22 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Tranchard in view of Feder and Rudrapatna.

The Examiner rejected claims 24 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Tranchard in view of Feder and Jeffrey.

ISSUES

(1) Written description

The Examiner concludes that "[c]laim 22 recites using an electronic program guide, event information tables, and history tables tracking bandwidth utilization as a function of a time of day, wherein the originally filed Specification states that use of history tables is an alternative to using an electronic program guides [sic], clearly distinguishing them to two distinct embodiments (see Applicant's Specification, page 16, lines 8-20)" (Ans. 4 and 5). Appellant contends that the use of "and/or" in the referenced portion of the disclosure permits the inclusion of history tables with system information tables and electronic program guide (EPG) data (Br. 19). Thus, the issue before is whether history tables are an alternative to using an electronic program guide?

(2) Nonstatutory subject matter

The Examiner concludes that claim 17 does not fall within any of the four statutory categories (i.e., process, machine, manufacture, or composition of matter) (Ans. 3 and 4), whereas Appellant contends *inter alia* that "the claimed signal of claim 17, is either structural or directed to a practical application of the signal" (Br. 18). Accordingly, the issue before us is whether the signal (i.e., data stream embedded in a carrier) set forth in claim 17 is directed to any one of the four statutory subject matter categories?

(3) Obviousness

The Examiner concludes and the Appellant disagrees that it would have been obvious to one of ordinary skill in the art to apply the stored estimated required bandwidth teachings of Feder in Tranchard for improved insertion of content within the transport stream. The issue presented by the evidence and arguments is whether the skilled artisan would have applied the bandwidth estimation teachings of Feder during the insertion of content in the transport stream described by Tranchard?

FINDINGS OF FACT

(1) Written description

Appellant's disclosure states that changes in bandwidth use "may be predicted, however, by analyzing system information tables and/or electronic program guide (EPG) data (step 403) such as the event information table (EIT) which provides the lineup of current and upcoming programs" (Spec. 16). Appellant's disclosure further states that "[r]esources similar to the system information tables, such as history tables tracking bandwidth utilization as a function of the time of day, may be employed for other environments" (Spec. 16).

(2) Nonstatutory subject matter

Claim 17 is directed to the signal (i.e., data transport stream embedded in a carrier) that traverses the local transmitter 111 on transport stream 200.

(3) Obviousness

1. Tranchard describes an adaptive data insertion mechanism and method in which data is inserted within a transport stream without destructive disturbance to the transport stream (Abstract; paragraphs 0015 and 0055).

2. The data is inserted in the transport stream described by Tranchard "to make full use of [the] available bandwidth" (paragraph 0015).

3. In Tranchard, a data packet insertion means acts "to insert a packet of data in the transport stream by detecting the presence of a null packet and replacing this packet by the packet to be inserted" (paragraph 0016).

4. A packet ID counter 21 is used by Tranchard to count the number of null packets present in the transport stream in order to evaluate bandwidth availability so that packet insertion unit 25 can replace null packets with packet data stored in memory 27 (Figure 2; paragraphs 0015, 0051, 0056, and 0059).

5. Feder describes techniques for bandwidth optimization (Title).

6. One bandwidth optimization technique used by Feder is estimation of required bandwidth (paragraph 0371) needed for insertion of content (e.g., an advertisement) into a stream of video data (paragraph 0373).

PRINCIPLES OF LAW

(1) Written description

Under the written description portion of the first paragraph of 35 U.S.C. § 112, Appellant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he was in possession of the

invention. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991).

(2) Nonstatutory subject matter

"A transitory, propagating signal . . . is not a 'process, machine, manufacture, or composition of matter.'" *In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007).

(3) Obviousness

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). If that burden is met, then the burden shifts to Appellant to overcome the prima facie case with argument and/or evidence. *See Id.*

The Examiner's articulated reasoning in the rejection must possess a rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

ANALYSIS

(1) Written description

As indicated *supra* in the findings of fact, Appellant's disclosure clearly explains that history tables are a resource similar to system information tables, and that system information tables and electronic program guides are used in tracking use of bandwidth. Appellant's disclosure never states that "use of history tables is an alternative to using an electronic program guides [sic]" as contended by the Examiner (Ans. 4-5). Thus, we agree with Appellant's argument that the originally filed disclosure provides written description support for the subject matter set forth in claim

22 on appeal because "the use of 'and/or' in the referenced portion of the disclosure permits the inclusion of history tables with system information tables and electronic program guide (EPG) data" (Br. 19).

(2) Nonstatutory subject matter

As indicated *supra* in the findings of fact, claim 17 is directed to a signal (i.e., data transport stream embedded in a carrier). Appellant's arguments (Br. 15 to 18) that claim 17 fits within at least one of the four statutory subject matter categories under 35 U.S.C. § 101 are without merit in view of the *Nuijten* decision which held that a "transitory, propagating signal" does not fit within any of the four statutory subject matter categories. Accordingly, we agree with the Examiner that claim 17 is directed to nonstatutory subject matter.

(3) Obviousness

As indicated *supra* in findings of facts 1 to 4, Tranchard seeks "to make full use of [the] available bandwidth" during insertion of data into the transport stream by packet insertion unit 25. Feder teaches that bandwidth optimization can be achieved by using bandwidth estimation (findings of fact 5 and 6). Such an estimation technique involves estimating future available bandwidth. Thus, we agree with the Examiner's reasoning (Ans. 7) that it would have been obvious to one of ordinary skill in the art to modify Tranchard with the bandwidth estimation teachings of Feder for the advantages of "better predicting future bandwidth considerations and for dynamic determination of content insertion."

CONCLUSIONS OF LAW

A lack of written description has not been established by the Examiner.

The Examiner has established that claim 17 and the claims that depend therefrom are directed to nonstatutory subject matter.

The Examiner has established the obviousness of claim 1. Appellant has not presented any patentability arguments for claims 2 to 25 apart from the arguments presented for claim 1.

ORDER

The lack of written description rejection of claim 22 is reversed.

The nonstatutory subject matter rejection of claims 17 to 20 is affirmed.

The obviousness rejections of claims 1 to 25 are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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